

**AMENDMENTS TO THE CLAIMS/LISTING OF CLAIMS**

Please enter the following amendments without prejudice or disclaimer. This listing of claims will replace all prior versions, and listings, of claims in the application.

**In the claims:**

1-23. (Canceled)

24. (Currently amended) A method of reducing or moderating a postprandial rise in plasma glucose in a mammal comprising administering to said mammal **in need of reducing or moderating a postprandial rise in plasma glucose** an ~~amylin or an~~ amylin agonist analogue in an amount effective to reduce or moderate a postprandial rise in plasma glucose, wherein the amylin agonist analogue is a peptide ~~and binds to an amylin receptor~~ **having an amino acid sequence selected from the group consisting of**

a) <sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-  
E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-J<sub>1</sub>-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-  
Tyr-Z (SEQ ID NO:42)

**wherein**

**A<sub>1</sub> is Lys, Ala, Ser or hydrogen;**

**B<sub>1</sub> is Ala, Ser or Thr;**

**C<sub>1</sub> is Val, Leu or Ile;**

**D<sub>1</sub> is His or Arg;**

**E<sub>1</sub> is Ser or Thr;**

**F<sub>1</sub> is Ser, Thr, Gln or Asn;**

**G<sub>1</sub> is Asn, Gln or His;**

**H<sub>1</sub> is Phe, Leu or Tyr;**

**I<sub>1</sub> is Ile, Val, Ala or Leu;**

**J<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;**

**K<sub>1</sub> is Asn, Asp or Gln;**

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy, and

provided that when

(i) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro and K<sub>1</sub> is Asn; or

(ii) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Ser and K<sub>1</sub> is Asn;

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy;

b) <sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:44)

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and

provided that when

A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val and K<sub>1</sub> is Asn (SEQ ID NO:41),

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy;

c) <sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-'Ihr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-J<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:45)

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu

J<sub>1</sub> is Asn, Asp or Gln; and

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage wherein said intramolecular linkage comprises a disulfide bond, a

lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy;

provided that when

A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val and J<sub>1</sub> is Asn (SEQ ID NO:41),

then one or more of A<sub>1</sub> to J<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and

d) <sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-X-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-K<sub>1</sub>-L<sub>1</sub>-<sup>30</sup>Thr-M<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:31)

wherein

A<sub>1</sub> is Lys, Ala, Ser, Hydrogen or acetylated Lys;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr,

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

K<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

L<sub>1</sub> is Ser, Pro or Thr;

M<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a

lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy;

provided that

(a) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Phe, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Ser, and M<sub>1</sub> is Asn (SEQ ID NO:46);

(b) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Ile, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:47);

(c) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Thr, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:48);

(d) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val, K<sub>1</sub> is Pro, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:41);

(e) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro and M<sub>1</sub> is Asn (SEQ ID NO:43); or

(f) when A<sub>1</sub> is Lys, B<sub>1</sub> is Thr, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is His, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ala, K<sub>1</sub> is Leu, L<sub>1</sub> is Pro and M<sub>1</sub> is Asp (SEQ ID NO:49);

then one or more of any of A<sub>1</sub> to M<sub>1</sub> is not an L-amino acid and Z is not amino.

25. (Previously presented) The method of claim 24 wherein the amylin agonist analogue has the following amino acid sequence:

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-  
G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-J<sub>1</sub>-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:40)

wherein

A<sub>1</sub> is Lys, Ala, Ser or Hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Ser, Pro or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro, and K<sub>1</sub> is Asn; then one or more A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

26. (Previously presented) The method of claim 24 wherein the amylin agonist analogue has the following amino acid sequence:

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-J<sub>1</sub>-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:42)

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu;

J<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy, and provided that when

(a) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Pro and K<sub>1</sub> is Asn; or

(b) A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val, J<sub>1</sub> is Ser and K<sub>1</sub> is Asn;

then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

27. (Previously presented) The method of claim 24 wherein the amylin agonist analogue has the following amino acid sequence:

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-K<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:44)

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

K<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val and K<sub>1</sub> is Asn (SEQ ID NO:41); then one or more of A<sub>1</sub> to K<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

28. (Previously presented) The method of claim 24 wherein the amylin agonist analogue has the following amino acid sequence:

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-Y-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-Asn-H<sub>1</sub>-Gly-<sup>25</sup>Pro-I<sub>1</sub>-Leu-Pro-Pro-<sup>30</sup>Thr-J<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:45)

wherein

A<sub>1</sub> is Lys, Ala, Ser or hydrogen;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr;

I<sub>1</sub> is Ile, Val, Ala or Leu

J<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to



each other to form an intramolecular linkage wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Val and J<sub>1</sub> is Asn (SEQ ID NO:41); then one or more of A<sub>1</sub> to J<sub>1</sub> is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

29. (Previously presented) The method of claim 24 wherein said amylin agonist analogue is any one of <sup>18</sup>Arg<sup>25,28</sup>Pro-h-amylin (SEQ ID NO:3), des-<sup>1</sup>Lys<sup>18</sup>Arg<sup>25,28</sup>Pro-h-amylin (SEQ ID NO:6), <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:1), des-<sup>1</sup>Lys<sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:10), <sup>18</sup>Arg<sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:8), des-<sup>1</sup>Lys<sup>18</sup>Arg<sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:9), <sup>25</sup>Pro<sup>26</sup>Val<sup>28,29</sup>Pro-h-amylin (SEQ ID NO:7), or des-<sup>1</sup>Lys<sup>25</sup>Pro<sup>26</sup>Val<sup>28,29</sup>Pro-h-amylin (SEQ ID NO:38).

30. (Previously presented) The method of claim 24 wherein the amylin agonist analogue is <sup>25,28,29</sup>Pro-h-amylin (SEQ ID NO:1).

31-37. (Canceled)

38. (Previously presented) The method of claim 24 wherein the mammal has diabetes.

39. (Previously presented) The method of claim 38 wherein the diabetes is type 1.

40. (Previously presented) The method of claim 38 wherein the diabetes is type 2.

41. (Previously presented) The method of claim 25 wherein the mammal has diabetes.

42. (Previously presented) The method of claim 41 wherein the diabetes is type 1.

43. (Previously presented) The method of claim 41 wherein the diabetes is type 2.

44. (Previously presented) The method of claim 26 wherein the mammal has diabetes.

45. (Previously presented) The method of claim 44 wherein the diabetes is type 1.
46. (Previously presented) The method of claim 44 wherein the diabetes is type 2.
47. (Previously presented) The method of claim 27 wherein the mammal has diabetes.
48. (Previously presented) The method of claim 47 wherein the diabetes is type 1.
49. (Previously presented) The method of claim 47 wherein the diabetes is type 2.
50. (Previously presented) The method of claim 28 wherein the mammal has diabetes.
51. (Previously presented) The method of claim 50 wherein the diabetes is type 1.
52. (Previously presented) The method of claim 50 wherein the diabetes is type 2.
53. (Previously presented) The method of claim 30 wherein the mammal has diabetes.
54. (Previously presented) The method of claim 53 wherein the diabetes is type 1.
55. (Previously presented) The method of claim 53 wherein the diabetes is type 2.
56. (Previously presented) The method of claim 24 wherein the amylin agonist analogue has the following amino acid sequence:

<sup>1</sup>A<sub>1</sub>-X-Asn-Thr-<sup>5</sup>Ala-Thr-X-Ala-Thr-<sup>10</sup>Gln-Arg-Leu-B<sub>1</sub>-Asn-<sup>15</sup>Phe-Leu-C<sub>1</sub>-D<sub>1</sub>-E<sub>1</sub>-<sup>20</sup>F<sub>1</sub>-G<sub>1</sub>-  
Asn-H<sub>1</sub>-Gly-<sup>25</sup>I<sub>1</sub>-J<sub>1</sub>-Leu-K<sub>1</sub>-L<sub>1</sub>-<sup>30</sup>Thr-M<sub>1</sub>-Val-Gly-Ser-<sup>35</sup>Asn-Thr-Tyr-Z (SEQ ID NO:31)

wherein

A<sub>1</sub> is Lys, Ala, Ser, Hydrogen or acetylated Lys;

B<sub>1</sub> is Ala, Ser or Thr;

C<sub>1</sub> is Val, Leu or Ile;

D<sub>1</sub> is His or Arg;

E<sub>1</sub> is Ser or Thr;

F<sub>1</sub> is Ser, Thr, Gln or Asn;

G<sub>1</sub> is Asn, Gln or His;

H<sub>1</sub> is Phe, Leu or Tyr,

I<sub>1</sub> is Ala or Pro;

J<sub>1</sub> is Ile, Val, Ala or Leu;

K<sub>1</sub> is Ser, Pro, Leu, Ile or Thr;

L<sub>1</sub> is Ser, Pro or Thr;

M<sub>1</sub> is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkylloxy, aryloxy or aralkylloxy; and provided that

(a) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Phe, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Ser, and M<sub>1</sub> is Asn (SEQ ID NO:46);

(b) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Ile, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:47);

(c) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Thr, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ile, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:48);

(d) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val, K<sub>1</sub> is Pro, L<sub>1</sub> is Pro, and M<sub>1</sub> is Asn (SEQ ID NO:41);

(e) when A<sub>1</sub> is Lys, B<sub>1</sub> is Ala, C<sub>1</sub> is Val, D<sub>1</sub> is His, E<sub>1</sub> is Ser, F<sub>1</sub> is Asn, G<sub>1</sub> is Asn, H<sub>1</sub> is Leu, I<sub>1</sub> is Pro, J<sub>1</sub> is Val, K<sub>1</sub> is Ser, L<sub>1</sub> is Pro and M<sub>1</sub> is Asn (SEQ ID NO:43); or

(f) when A<sub>1</sub> is Lys, B<sub>1</sub> is Thr, C<sub>1</sub> is Val, D<sub>1</sub> is Arg, E<sub>1</sub> is Ser, F<sub>1</sub> is Ser, G<sub>1</sub> is His, H<sub>1</sub> is Leu, I<sub>1</sub> is Ala, J<sub>1</sub> is Ala, K<sub>1</sub> is Leu, L<sub>1</sub> is Pro and M<sub>1</sub> is Asp (SEQ ID NO:49);

then one or more of any of A<sub>1</sub> to M<sub>1</sub> is not an L-amino acid and Z is not amino.

57. (Previously presented) The method of claim 56 wherein the mammal has diabetes.

58. (Previously presented) The method of claim 57 wherein the diabetes is type 1.

59. (Previously presented) The method of claim 57 wherein the diabetes is type 2.

60-69. (Canceled)